

15. (previously presented) The method described in claim 14 wherein the step of providing the angular position adjustment means comprises the step of providing quill link means for providing adjustment of the angular position of said seat.
16. (previously presented) The method described in claim 15 further comprising the step of providing pivot adjustment collar means for providing adjustment of the angular position of said seat.
17. (previously presented) The method described in claim 14 wherein the step of providing the angular position adjustment means comprises the step of providing clamp link means for providing adjustment of the angular position of said seat.
18. (previously presented) The method described in claim 17 wherein the step of providing the clamp link means comprises the step of providing means for providing adjustment of the angular position of said seat by clamping at least one seat rail in different locations.
19. (previously presented) The method described in claim 14 wherein the step of providing the angular position adjustment means comprises the step of providing a support link means for providing adjustment of the angular position of said seat.
20. (previously presented) The method described in claim 13 further comprising the step of providing for adjustment of a horizontal offset of said support structure.

Remarks

I. General Arguments for Allowance of Claims

A. The Invention Falls Within a Crowded Art

The bicycle industry is classified as an extremely crowded art and any step forward should be regarded as significant.

B. The Cited invention of Lemmens (US-6,174,027) Solves a Different Problem

The invention of Lemmens is specifically related to seat post designs that are adjustable while riding. There is no real objective to keep the weight down. The necessity of an easily reachable adjustment knob dictates some of the shape and function of the invention.

The applicant's invention is specifically related to light-weight and easily adjustable seat posts, but not specifically to seat posts that can be adjusted while riding.

These different goals have different design requirements and this is shown in both the specification and the claims of this inventors' application.

Since the invention of Lemmens is primarily concerned with adjustment while riding, a completely different set design parameters, limitations, and goals were used than were used to create the applicants invention.

Furthermore, when weight and performance are considered without the need for adjustment while riding, all of the embodiments of the applicants' invention are much improved when compared to the embodiments of the invention of Lemmens.

C. Commercial Success/Commercial Acquiescence

The applicants' invention is currently being licensed by contracts with two licensees, and their licensed seat posts can already be found on a significant percentage of bicycles sold in the market. These licensed products are being sold on bikes made by some of the largest bicycle companies in the world as well as in retail stores.

Licensees:

Race Face: www.raceface.com

MAXM Components: www.maxmcomponents.com

Partial list of bicycle manufacturers producing models with licensed product:

Giant Bicycles: <http://www.giant-bicycles.com>

Kona Bicycles: <http://www.konaworld.com>

Rocky Mountain Bikes: <http://www.bikes.com/>

Ironhorse Bikes: <http://www.ironhorsebikes.com/>

Yeti Cycles: <http://www.yeticycles.com/>

Titus Cycles: <http://www.titusti.com>

D. Unsuggested Modification:

The cited patent of Lemmens lacks any suggestion that a more structurally supportive link scheme could or should be used, or that it would have any advantages.

II. Response to Rejection of Claims 1-3, 5-8, 11, and 13-16 Under 35 U.S.C. 102b

A. Response to Claim Rejections Regarding Lemmens (US-6,174,027) Under 35 U.S.C. 102

The applicant understands the nature of the objections under 35 U.S.C. 102b. Following are some arguments to clarify the applicant's position.

1. Applicant Specifically Teaches Novel Improvements Over Lemmens

Applicant wishes to point out paragraph 7 of the Background section of the Applicants' specification:

U.S. patent 6,174,027 to Lemmens uses a seat support pivotably attached to one end of a seat post with a threaded rod and knob as an angular control adjustment between the seat support and the seat post. This example of prior art is not ideal for lightweight applications. The threaded rod adjustment only serves to define the seat angle by separating the seat support and seat post. The threaded rod provides no support in any other direction due to the necessity of the rod to rotate for adjustment. The threaded rod is continuously free to rotate about at least one end. Additionally, the threaded joints that the rod threads into do not provide significant support to resist side and bending loads since they must be kept loose enough to allow free movement of the threads. Furthermore, to make the threaded rod and knob adjustment easily available while the bicycle is being ridden it is located a considerable distance from the seat rails, making the seat support structure carry significant bending loads. This lack of structural support from the angular control adjustment and remote adjustment location with respect to the seat rails creates stress and load conditions that lead to a heavy and bulky assembly.

Applicant further wishes to point out paragraph 8 of the Summary of the Invention section of the specification:

In general, the invention is composed of a triangular three-link structure. The seat post is contained within the first link. The seat is contained within the second link. A third link acts as a support structure between the first and second and completes the triangular structure. Each link or link assembly provides structural support in more than one direction.

2. Applicant Claims Novel Structure over Lemmens**a. The Invention of Lemmens is not a Three Link Structure**

The structure of the applicants' invention claims three structural links connected together with three pivotable axes in a triangular configuration. These links, as taught in the specification, provide solid support in more than one direction and produce better results.

The invention of Lemmens has only two structural elements with an adjustment that only supports the angle between them. This adjustment is not a structural link, it only provides

solid support along the axis of the adjustment screw to hold the two structural elements at a set distance apart in that location.

This is an important distinction. In the applicants invention, this third structural link allows for the assembly to be light-weight. It transfers loads better and requires much less material around the three pivot axes. In other words, the pivot (2) shown in figure 1a of the patent of Lemmens must be much stronger and heavier since the assembly has no third structural link.

b. The Cited Invention of Lemmens is not Rigid

The applicant claims a rigid assembly. It locks into place.

Due to the requirement of adjustment while riding, the invention of Lemmens is never rigid, it can always be altered with the turn of a knob.

The invention of Lemmens does not lock into place. There is no attempt to lock it into place and Lemmens fails to express any need for it. In fact, it was an objective to remain adjustable at all times.

By creating a rigid assembly, the applicant minimizes many issues one skilled in the art must take into account when designing a seat post clamp such as creaking, slipping, unintentional adjustment, adjustment drift etc. While always important, these issues are even more important in high-end, light-weight applications.

III. Response to Rejection of Claims Under 35 U.S.C. 103

A. Response to Rejection of Claims 13-16 Under U.S.C. 103(a)

The applicant argues that with an understanding of the arguments listed above, it is clear that the invention is patentable over Lemmens (6,174,027). Lemmens does not show the use of all the claimed invention.

With respect to Kurke (5,255,301), there is no assembly shown that resembles the applicants invention, but it does show an assembly with both angular and horizontal position adjustment.

Conclusion

With an understanding of the arguments above and the amendments to claims 1, 5, and 13 it should be clear that there are some fundamental differences between the cited prior art of Lemmens and the claimed invention of the applicant.

The prior art lacks structural support in its adjustment member that the application of this applicant clearly claims and teaches the advantages of.

Applicant submits that this application is now in full condition for allowance, which action applicant respectfully solicits.

Respectfully submitted,



Kevin Tissue
Applicant pro se
405 Parkview Drive
Park City, UT 84098
801-403-6409
435-658-1778 Fax
ktissue@nextdimengineering.com